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Education needs of teacher candidates towards web based collaborative learning studies

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Abstract

The aim of this study is to investigate the teacher's education needs towards collaborative learning. The sample of the study consists of 200 teacher from Secondary and High Schools in North Cyprus. "Web based collaborative learning" questionnaire developed by Ozdamli & Bicen (2009) was used to collect data. The first phase of the questionnaire involves 9 demographic questions and second phase involves 20 likert type statements. The result of the study show that the high school teachers in TRNC need to be educated about creating videos, blogging pages, publishing their own studies, appyling web based education applications, and using wikis in their courses. Ministry of Education should give in-service training to teachers considering these needs.

Keywords: Technology; collaborative learning; teacher candidates; web based learning.

1. Introduction

The fast improvement in Science and technology is affecting educational and social system as much as affecting the economical system. Nowadays knowledge is the key to the development of economy in developed countries. Technology is an important factor in the development of education process. As a result of fast development in information technology, information socities have emerged and therefore socities need to follow the new technology and apply it for themselves (Keser, 1998).

The increase in demand for education and the increase in the amount of information are some of the major reasons of the integration of computers and internet into education. Web-based educational applications offer information and idea sharing between one another who are geographically far away, constructivism learning environment, self education, and collaborative learning. Individuals can communicate by written and video communication. Nowadays, researchers are working on the combination of technological applications and collaborative learning method (Jassen, Erkers, Jaspers & Broeken, 2005).

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Web-based learning is being carried on by the distribution of lecture material education management, student evaluation and communication with students (Mutlu & Öztürk, 1999). According to Demirli (2002), web-based learning is the learning-teaching period in which communication and interaction of students with the organizers, directors and instructor of education takes place with the use of computer and network technologies. In other words web-based teaching is a new teaching model that can be used to bring_new information and skills, enrich the learning habits and experiences of students (Şahan, 2005).

According to S.S. Büyükgöz-C. Çivi (1999) collaborative learning is the study of students that helps them to learn from one another in small groups with a common objective (Yeşilyaprak, 1995). lists the advantages of collaborative learning as; The interaction among students pleasure and offers a fun learning environment during the learning process. Helps students to motivate in learning and maintain their focus. The individual can look at the world from someone else's point of view, therefore increasing their empathy. Teaces to respect other's views, to be tolerant and to argue. Briefly it brings democratic living habits. Also, according to (Webb, 1982,1983; Slavin, 1990, Özder, 1996) it is an effective way to gain problem solving and high level thinking abilities. It lowers the concern and fear of students when making a mistake and plays an affective role in the teaching-learning process.

In technology supported collaborative learning students work on the subject that is assigned to their groups and produce a group project (Lipponen, Rahikainen, Lallimo & Hakkarainen, 2003). The group memebers use technology supported collaborative learining tools that supplies information sharing to communicate among themselves, the teachers and other group members.

2. Related Research

In Özdamlı and Uzunboylu's (2007) study, the attitudes of students who studied in a technology supported collaborative learning environment was defined. The research was a single group experimental study where a pre-test and a final test was applied. As a result of the research it was observed that the students have a positive attitude for technoılogy. It was also observed that after studing in a technology supported collaborative learning environment, the student's positive attitudes increased.

Bozkurt, Orhan, Keskin, Mazi (2008) have researched the effect of collaborative learning method in science and technology courses on the student's final test sucess. The study was planned as a model with pre test and final test with a control group. The experimental group in which collaborative learning method was applied resulted in a better academic success compared to the control group.

Gödek (2004) described group and collaborative approach; the importance, the purposes, benefits for students and teachers, the problems that come up when teachers use these methods was discussed. The group study, collaborative approach, the diversity of teachers who used individual study and collaborative study was defined and the varieties of group studies was specified. At the end of the study, some suggestion to teachers on their approach to group and collaborative studies.

The purpose of Doymuş, Şimşek and Bayrakçeken's (2004) research was to define the affect of academic succes of collaborative learning method and traditional learning methods on students in a science course and define student's views on collaborative learning method. One primary school was defined as the experimental and the other as the control group. As a result, not only the academic sucess increased but also trust among students increased.

3. The Aim of the Research

The purpose of this study is to define the education needs of teacher candidates towards web based collaborative learning applications. In order to reach this purpose following questions were sought;

- Does the departement of teacher candidates make a difference in education needs
- Does the rate of internet use of teacher candidates make a difference in education needs.

4. Method

This study is a descriptive study.

4.1. Instrument

The survey that was developed by Özdamlı & Bicen (2009) was used to collect data for the research to address the education needs of teacher candidates towards web based collaborative learning applications. The scale was created in two parts. The first part of the scale was created to collect demographic information about teacher candidates and the second part was created to define education needs of teacher candidates with 20 questions. The second part of the survey is in five-point (1 point representing strongly disagree and 5 representing strongly agree) scale. The applied scale is defined as the Cronbach's alpha (0.952).

4.2. Participants

The participants of the study group of the research is 300 teacher candidates from Near East University and Atatürk Teacher Academy. In the study group of the research, teacher candidates of Academy (n=100), computer education and instructional technology (n=100) and Turkish education (n=100) are present. The participants who form the study group of the research were volunteers, therefore reliable data are collected. The participating teacher candidates were %49 female, %51 male (149 female, 151 male).

4.3. Procedure

After getting the required permissions from authorities the teacher candidates were surveyed. The participants were informed with required information before the survey was applied. In order to get the most reliable results, the teacher candidates gathered in a classroom other than their own teachers classroom to be surveyed. This way, the teacher candidates could reflect their own ideas without any worry.

4.4. Data Analysis

The data that was collected from this research was evaluated in the SPSS 16 application. In the evaluation process Pearson Corellation, Mean, Standart deviation, One Way Anova, LSD Test and T-test analysis is applied. The results from the analysis is compared with a 0.05 significant level.

5. Results

In the research it is observed that the teacher candidates communicate in web environment among themselves (x=4.33, sd= 0.884) and share the lecture notes related to this (x=3.94,sd= 1.018). The teacher candidates create vidio materials about the subject (x=3.52, sd= 1.214) and transfer their videos to social sharing sites (x=4.27, sd= 1.078). The results of the analysis shows that teacher candidates create their own blog sites (x=3.51, sd= 1.219) and use instant messaging applications (MSN, Skype, Yahoo Messenger etc.) without any difficulty (x=4.37, sd= 0.896). Te teacher candidates think that they will communicate online (x=3.93, sd= 1.051) and use social sharing sites (Facebook, Hi5, Myspace etc.) with their students in the future for collaborative studies. The teacher candidates think that they will be able to integrate lecture notes in their web and blog sites (x=3.51, sd= 1.137).

The teacher candidates need education on integrating online calendars into their blog sites to use for scheduling collaborative studying dates and times (x=3.17, sd= 1.088) and sharing the materials in social sharing sites with their own sites by embedding objects (x=3.17, sd= 1.133). The teacher candidates also need education on creating blog sites to be used for collobrative studies for their students (x=3.25, sd= 1.151) and organizing online activities to evaluate collaborative learning processes (x=3.29, sd= 1.135). To have the enough experince in using online tools for collaborative learning studies (x=3.22, sd= 1.192) and using the wiki for collaborative learning studies (x=3.37, sd= 1.135) are areas in which teacher candidates need education as well.

The teacher candidates need education on courses in which they have taken in theory but could't practice enough.

Table 1. Departments

Department	N	Mean	SD	F	P
Academy Students	100	3.813	.527		
CEIT Students	100	3.783	.665	12.446	P<0.05
Turkish Teaching Students	100	3.404	.729		

There is no significant difference observed between Academy students and CEIT students, but there is a significant difference in Turkish education students. The significant difference in Turkish education students is possibly related to the deficiency in computer and technology courses.

Table 2. Using internet

Frequency of Use	N	Mean	SD	F	P
Less than 1 hour	38	3.21	.749		
1 hour	65	3.61	.678		
2 hours	47	3.56	.668	9.79	P<0.05
3 hours	61	3.66	.590		
More than 4 hours	89	3.95	.553		
Total	300	3.66	.670		

It is observed from Table 2 that most of the teacher candidates use the internet more than 4 hours daily. In Özdemir & Usta's (2007) research on "A research on analyzing the purpose of using the internet among primary school teacher candidates". It is observed that most of the student's daily internet usage time is almost same. In the same research it is stated that students use the internet mostly for education purposes and also as a communication tool. An increase in student's usage skills on internet tools is observed as a result of higher frequency in internet usage.

6. Results and Suggestions

The following results are obtained from this research with the goal to determine the education needs of teacher candidates towards web-based collaborative learning.

The students mentioned that they often use the internet. In Özdemir & Usta's (2007) research, it was concluded that the teacher candidates use the internet for "obtaining information", "communication" and "game play" purposes. Therefore, it can be pointed out that an increase in internet usage results in an increase of usage skills of internet tools.

Study group includes Academy students (100 people), CEIT students (100 people) and Tukish education students (100 people). When defining the education needs of teacher candidates towards web based collaborative learning studies, there was no significant difference in Academy students (mean: 3,813) and CEIT students (mean: 3,783) where as there is a significant difference of Turkish education students (mean: 3,404) compared to Academy and CEIT students. As a result Turkish education students need education on computer and internet usage.

In accordance with the results, it is suggested that,

- Turkish Teaching students are encourged in the area of computers and internet usage.
- Explanation on advantages and disadvantages of using computers and web technologies for Turkish education applications.
- A research to be done on the impact of language when using of computer and internet.
- Some courses can be offered that are appropriate for the Turkish education department. Some of the homeworks can be offered to students over the internet.
- The Turkish education students should be provided with the idea that computer technology and it's education is a part of their curriculum and in order to increase the student's computer and internet usage skills, some courses should be offered in a computer based environment. Speaking generally students (Academy, CEIT and Turkish education) have enough information about computer ad web technology usage in theory, but they lack skills in applications (practical).

It is possible to overcome the deficiency by re-organizing the practical (application) part of the course's outline (computer and web technology usage) by redefining the education needs.

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